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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/675,206	09/30/2003	Vincent Onde	02-RO-318	9940

23334 7590 06/13/2007

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EXAMINER	
PHAN, HANH	
ART UNIT	**PAPER NUMBER**
2613	

MAIL DATE	DELIVERY MODE
06/13/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/675,206	ONDE ET AL.	
	Examiner	Art Unit	
	Hanh Phan	2613	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *09 March 2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-26* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *2-7,9-11 and 18-23* is/are allowed.

6)☒ Claim(s) *1,8,12,14-17 and 24-26* is/are rejected.

7)☒ Claim(s) *13* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. This Office Action is responsive to the Amendment filed on 03/09/2007.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 8, 12, 24 and 25 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

-Claims 8 and 24 recite the limitation "**said second voltage level**" in line 5. There is insufficient antecedent basis for this limitation in the claim.

-Claims 8 and 24 recite the limitation "**said resistive biasing means**" in line 16. There is insufficient antecedent basis for this limitation in the claim.

-Claims 8 and 24 recite the limitation "**said communicating terminal**" in lines 22 and 23. There is insufficient antecedent basis for this limitation in the claim.

-Claims 12 and 25 recite the limitation "**said second voltage level**" in line 9. There is insufficient antecedent basis for this limitation in the claim.

-Claims 12 and 25 recites the limitation "**said third opto-isolator**" in line 34. There is insufficient antecedent basis for this limitation in the claim.

-Claims 12 and 25 recite the limitation "**the fourth opto-isolator**" in lines 37 and 38. There is insufficient antecedent basis for this limitation in the claim.

-Claims 12 and 25 recite the limitation **"the four opto-isolator phototransistors"** in lines 39 and 40. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 1, 14-17 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Prior Art Figure 3 in view of Riley (US Patent No. 6,750,463).

Regarding claims 1 and 17, Prior Art Figure 3 teaches an optical coupling device operative over a bidirectional data link between at least first and second communicating units (i.e., first communicating unit A and second communicating unit B), each operative to send and receive data along a common wire of the data transmission link, the device comprising:

at least first and second optical coupling means (i.e.; a first optical coupling means comprises a photon flux source 58A and a photon flux detector 60A and a second optical coupling means comprises a photon flux source 58B and a photon flux detector 60B), each comprising a photon flux source and a photon flux detector, wherein:

the photon flux source of the first optical coupling means (i.e., LED 58 A) is commanded in response to a data transmission by the first communicating unit,

the photon flux source of the second optical coupling means (i.e., LED 58B) is commanded in response to a data transmission by the second communicating unit,

the photon flux detector of the first optical coupling means (i.e., photo flux detector 60A) is operative to produce a signal on the data transmission link at the first communicating unit in response to a command of the photon flux source of the second optical coupling means from the second communicating unit,

the photon flux detector of the second optical coupling means (i.e., photon flux detector 60B) is operative to produce a signal on the data link at the second communicating unit in response to a command of the photon flux source of the first optical coupling means from the first communicating unit.

The Prior Art Figure 3 differs from claims 1 and 17 in that it fails to teach first inhibiting means for inhibiting the photon flux source of the second optical coupling means in response to an activation of the photon flux source of the first optical coupling means, and second inhibiting means for inhibiting the photon flux source of the first optical coupling means in response to an activation of the photon flux source of the second optical coupling means. Riley, from the same filed of endeavor likewise teaches an optical isolation device (Figures 2-4). Riley further teaches first inhibiting means for inhibiting the photon flux source of the second optical coupling means in response to an activation of the photon flux source of the first optical coupling means, and second inhibiting means for inhibiting the photon flux source of the first optical coupling means

in response to an activation of the photon flux source of the second optical coupling means (i.e., Figs. 2-4, from col. 5, line 47 to col. 8, line 66). Based on this teaching, it would have been obvious to one having skill in the art at the time the invention was made to incorporate the first inhibiting means for inhibiting the photon flux source of the second optical coupling means in response to an activation of the photon flux source of the first optical coupling means, and second inhibiting means for inhibiting the photon flux source of the first optical coupling means in response to an activation of the photon flux source of the second optical coupling means as taught by Riley in the system of the Prior Art Figure 3. One of ordinary skill in the art would have been motivated to do this since allowing switching between the transmit mode and receive mode and to reduce the interference between the signals and increasing the signal to noise ratio.

Regarding claim 14, the combination of Prior Art Figure 3 and Riley teaches the optical coupling means comprises at least one logic type opto-isolator (i.e., Figs. 2-4 of Riley).

Regarding claim 15, the combination of Prior Art Figure 3 and Riley teaches wherein the optical coupling means comprises at least one linear type opto-isolator comprising an illumination source and first and second matched photodetectors each responsive to an illumination from the source, wherein a detection signal from the second photodetector serves to produce a signal for inhibiting an illumination source of the communicating unit receiving the data (i.e., Fig. 2 of Rilay, from col. 5, line 47 to col. 8, line 66).

Regarding claims 16 and 26, the combination of Prior Art Figure 3 and Riley

wherein the data link is a bidirectional serial type link (i.e., Figs. 2-4 of Riley).

Allowable Subject Matter

6. Claim 13 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

7. Claims 2-7, 9-11 and 18-23 are allowed.

Response to Arguments

8. Applicant's arguments with respect to claims 1-26 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hanh Phan whose telephone number is (571)272-3035. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Chan, can be reached on (571)272-3022. The fax phone number for the organization where this application or proceeding is assigned is (571)273-8300. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)305-4700.

HANH PHAN
PRIMARY EXAMINER

Approved
06/07/06

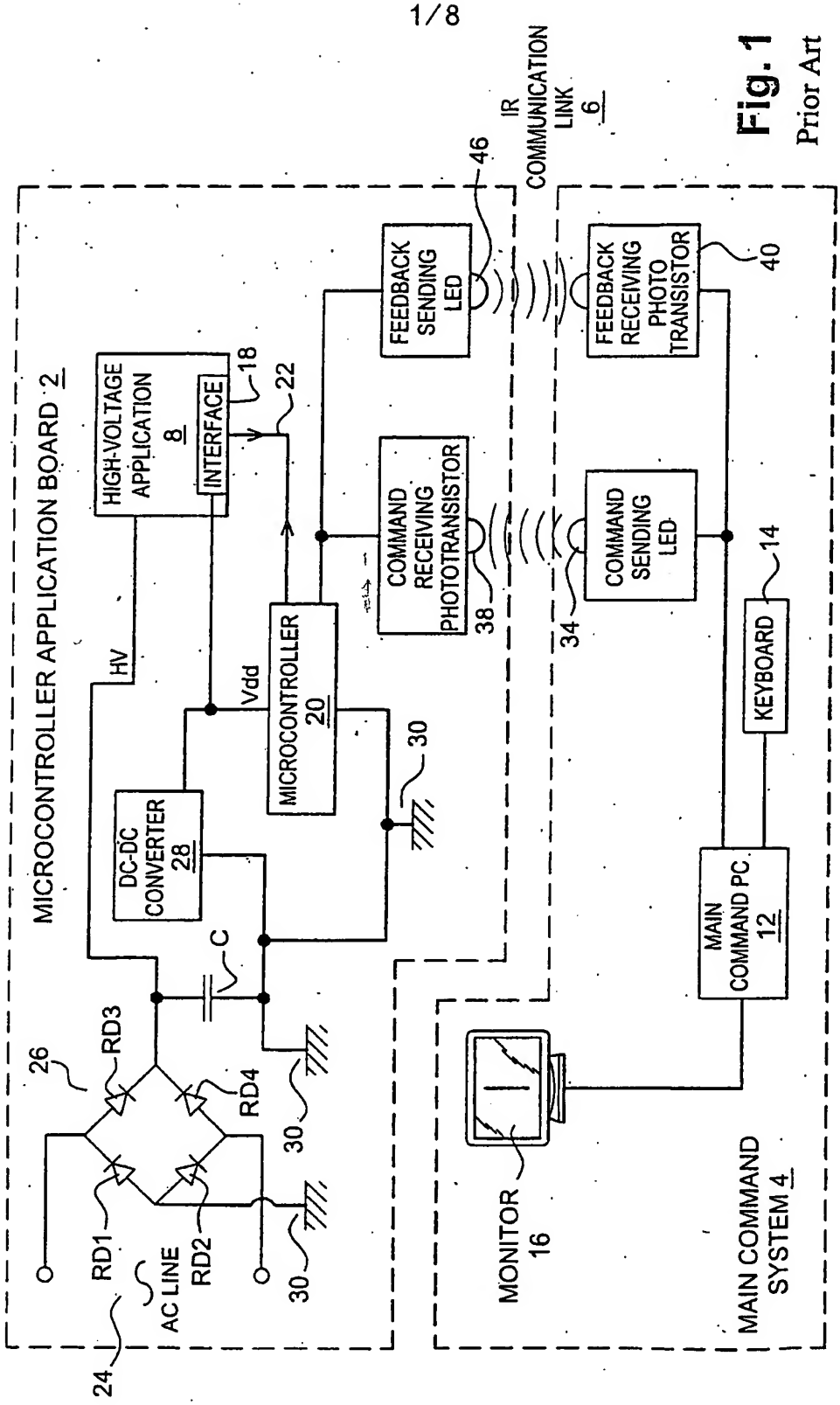

Fig. 1
Prior Art

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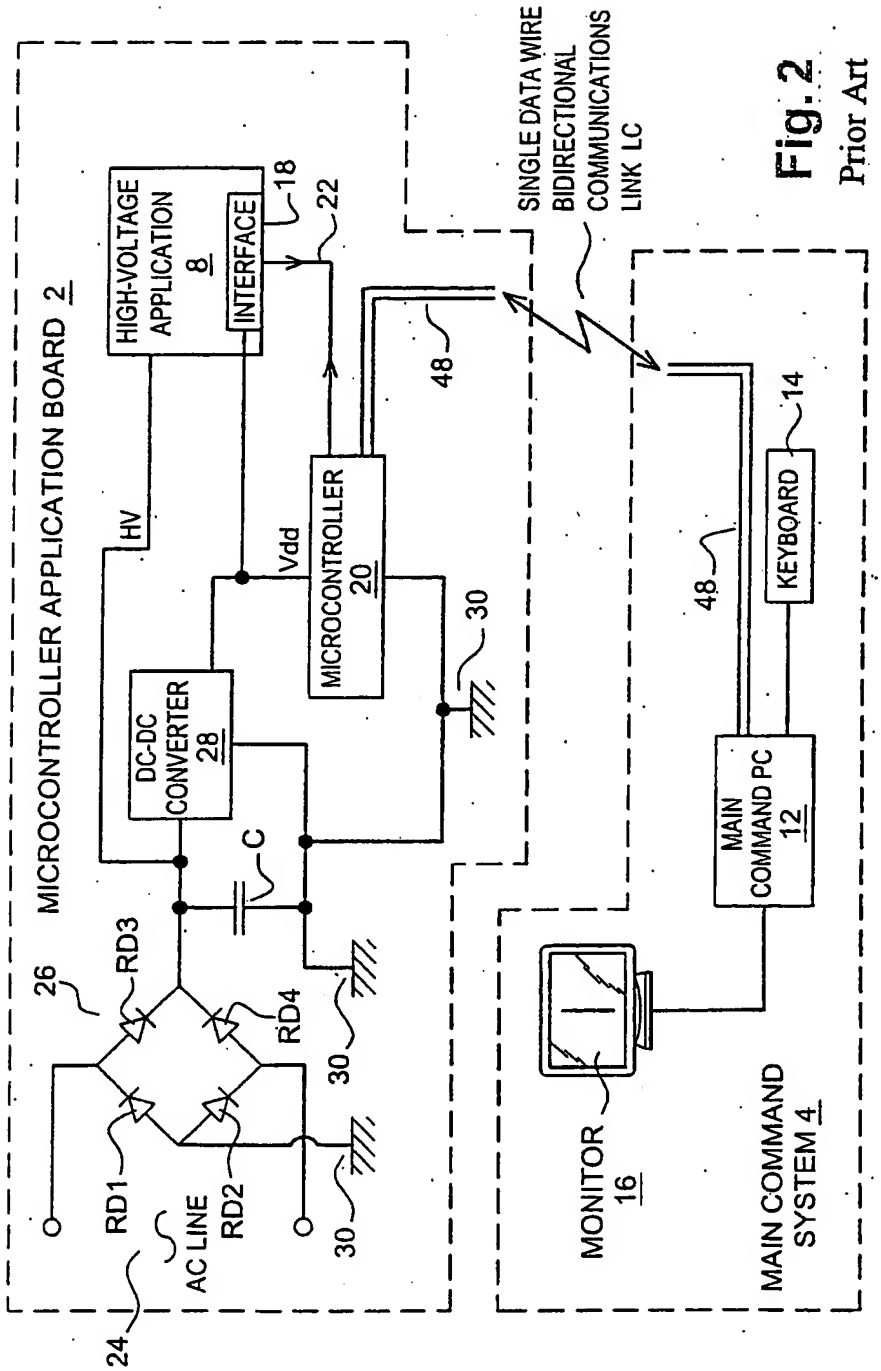

Fig. 2
Prior Art

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06/26/06

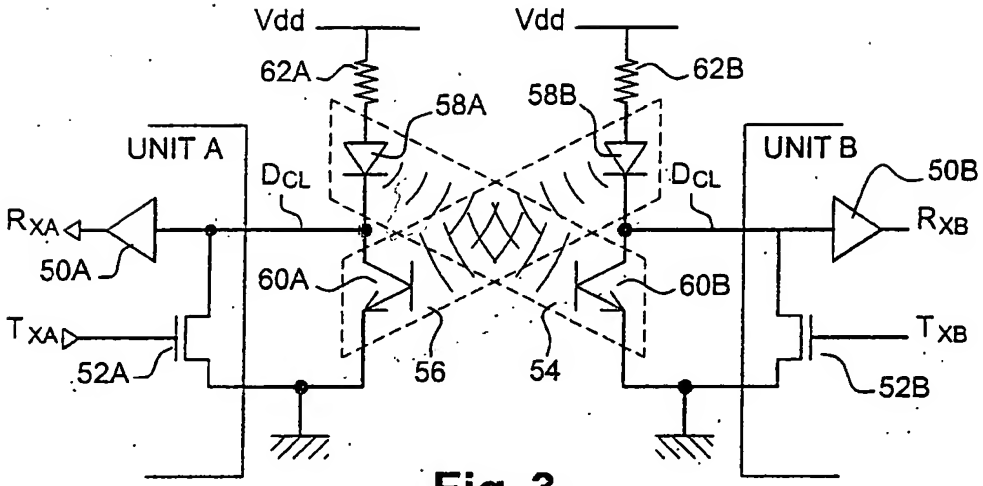

Fig. 3
Prior Art

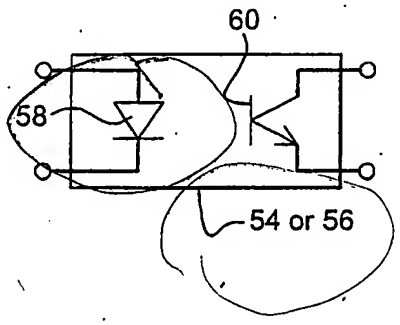

Fig. 4
Prior Art

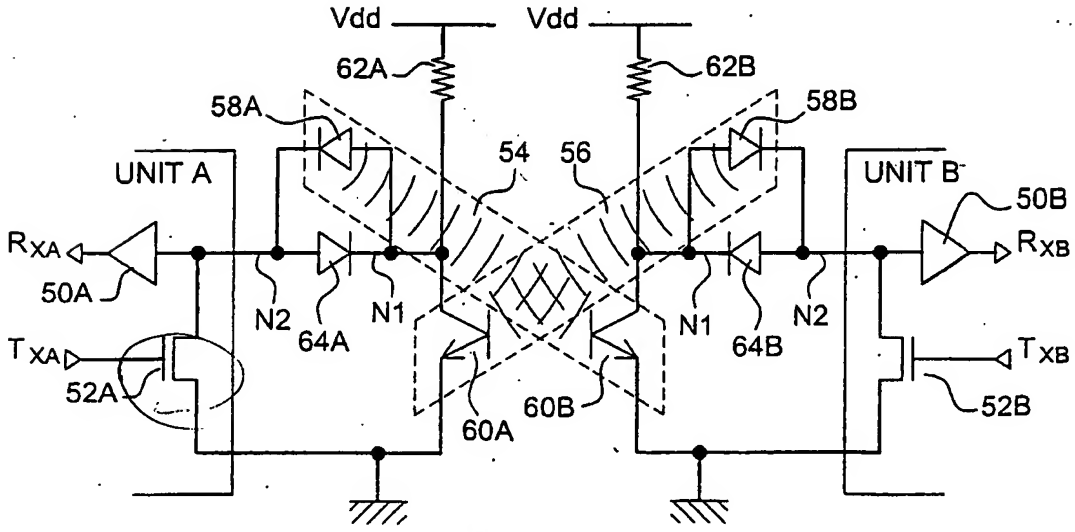

Fig. 5